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Date: June 23, 1994

Ms. Brenda Norton, PE
 Atlantic Division, Naval Facilities Engineering Command
 Environmental Quality Division
 Code: 1822
 Building N 26, Room 54
 1510 Gilbert Street
 Norfolk, Va 23511-2699

Re: Naval Weapons Station, Yorktown, Va.
 Review of draft *Background Literature Review for Ecological Investigations*

Dear Ms. Norton:

The U.S. Environmental Protection Agency (EPA) has reviewed the Navy's draft *Background Literature Review for Ecological Investigations* at the Naval Weapons Station-Yorktown (WPNSTA) NPL site, and we offer the following comments and concerns:

GENERAL COMMENTS

1. It appears that EMAP was utilized as a reference source for the preparation of the draft *Review*. Specifically, was the EPA Report entitled *"EMAP-Estuaries Virginia Province - 1991 Statistical Summary"*, EPA/620/R-94-005, dated March, 1994, utilized?
2. The draft *Review* document provides a very good overview of the ecological conditions and inventory of species found within the different salinity zones in the Chesapeake Bay and York River Basin. The amount of information collected and the sources consulted in the preparation of this *Review* adequately represent the existing general ecological conditions within the Chesapeake Bay ecosystem. However, the draft *Review* may lack the specific detail necessary to evaluate the impacts upon the recommended off-site "background" locations. This problem appears not to be directly linked with the reference sources consulted, but with the presentation and organization of the draft *Review*. The following general comments may help illustrate this point:
3. There are numerous maps of the Chesapeake Bay contained within the draft *Review* document; however, the location of the Naval Weapons Station (WPNSTA), on-site streams of concern, and off-site waterbodies determined to be potential "background" locations are not depicted in relation to each other on these maps. The figures should delineate both on-site and off-site areas to aid in the evaluation of potential impacts.
4. The majority of the literature review was obtained through personal communication and specific references; however, this information was not included with the draft *Review*.
5. The presentation of the data compiled for the background literature review and the corresponding results of the background literature review were presented in a very specific manner in the draft document; however, to utilize the *Review* to determine adequate "background" sampling locations, the

data for each creek or pond evaluated should be grouped together. If the water quality, sediment quality, flora, and aquatic fauna data were presented depicting the corresponding concentration ranges of chemicals and species found within each waterbody of concern, it would allow the reviewer to understand the ecological interactions and constraints of each off-site waterbody being considered. Using this method of data presentation, the conditions of each waterbody of concern would be presented to help evaluate whether the off-site waterbody has a "healthy" environment or not.

SPECIFIC COMMENTS

1. The purpose of the draft *Review*, as described in Section 1.0, is to find an off-site location not impacted by the WPNSTA. The main constraint to this search was the recommendation that "background" data should be collected within the York River Basin *only* (Section 3.2, p. 3-6 paragraphs 1 and 2). What is the rationale and/or justification for using each of the waterbodies listed in the recommendation section as "background" stations (Section 6.0, pp 6-1, 6-2)? A description including the ecological constraints, proximity to the WPNSTA, impacts from other sources, and map location of each of the waterbodies was not provided in the draft *Review* to adequately determine which if any of these waterbodies are suitable "background" locations. In addition, the reasons for choosing these waterbodies should have been presented and discussed within Section 4 (Results) before a recommendation was established.

2. Section 4.1.4.1, pages 4-8 through 4-11

This section of the draft *Review* discusses the benthic macroinvertebrate communities commonly associated with the Chesapeake Bay and at what time of year would be the best for sampling these communities; however, a list of species expected in a "healthy" environment in the lower portion of the Chesapeake Bay (as page 4-10, 2nd paragraph infers) was not presented. The addition of this information may help to justify the suitable "background" locations listed in Section 6.0, because when a reconnaissance of the suitable "background" locations is conducted, the presence or absence of the "healthy" environment species could be determined.

This concludes EPA's review comments on the Navy's draft *Background Literature Review for Ecological Investigations* at the WPNSTA. If you have any questions or concerns regarding the above, please feel free to call me at (215) 597-1110,

Sincerely,



Robert Thomson, PE
VA/WV Superfund Federal Facilities (3HW71)

cc: Lisa Ellis (VDEQ, Richmond)
Jennifer Loftin (WPNSTA, Code 09E)
Andy Rola (BVWST, Phila.)
Bob Davis (USEPA, 3HW13)